

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A process for the electrolytic transformation of at least one furan-based starting compound (A) in an electrolysis circuit wherein the process is carried out in an electrolysis cell in which at least one hydrogenation catalyst is present, the process comprising both steps (i) and (ii):

(i) electrolytically oxidizing the at least one furan-based starting compound (A) to produce

(a) at least one alkoxyated furan compound (B) which has a C-C double bond in the five-membered heterocyclic ring, and

(b) hydrogen;

(ii) hydrogenating the C-C double bond in the presence of at least one hydrogenation catalyst using hydrogen obtained at a cathode in step (i), hydrogen fed to the electrolysis circuit from outside or by electrocatalytic hydrogenation;

Claim 2 (previously presented): A process as claimed in claim 1, wherein the electrolysis cell is an undivided electrolysis cell.

Claim 3 (previously presented): A process as claimed in claim 1, wherein at least one electrode is in contact with the at least one hydrogenation catalyst.

Claim 4 (previously presented): A process as claimed in claim 3, further comprising applying the hydrogenation catalyst to a graphite felt.

Claim 5 (previously presented): A process as claimed in claim 3, further comprising washing the hydrogenation catalyst onto the at least one electrode.

Claim 6 (previously presented): A process as claimed in claim 3, wherein the hydrogenation catalyst is in the form of a suspension.

Claim 7 (Original): A process as claimed in claim 1, wherein at least one of the electrodes used is a gas diffusion electrode.

Claim 8 (Original): A process as claimed in claim 1, wherein at least one of the electrodes used is a composite comprising at least one conventional electrode material and at least one material for a gas diffusion electrode.

Claim 9 (Original): A process as claimed in claim 8, wherein the conventional electrode material comprises carbon.

Claim 10 (currently amended): A process as claimed in claim 3, wherein the at least one electrode which is in contact with ~~the~~ a hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 11 (previously presented): A process as claimed in claim 1, wherein the at least one alkoxylated furan compound (B) produced in step (i) is reacted in step (ii) to form at least one ring-opened butane derivative.

Claim 12 (Original): A process as claimed in claim 11, wherein the ring-opened butane derivative is 1,1,4,4-tetramethoxybutane or a substituted 1,1,4,4-tetramethoxybutane.

Claim 13 (previously presented): A process as claimed in claim 2, wherein at least one electrode is in contact with the at least one hydrogenation catalyst.

Claim 14 (previously presented): A process as claimed in claim 4, wherein the at least one electrode which is in contact with the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 15 (previously presented): A process as claimed in claim 5, wherein the at least one electrode which is in contact with the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 16 (previously presented): A process as claimed in claim 6, wherein the at least one electrode which is in contact with the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 17 (currently amended): A process as claimed in claim 7, wherein the at least one electrode is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 18 (previously presented): A process as claimed in claim 8, wherein the at least one electrode is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 19 (previously presented): A process as claimed in claim 9, wherein at least one electrode is in contact with a hydrogenation catalyst and is used as the cathode or as an anode or as the cathode and the anode.

Claim 20 (previously presented): A process as claimed in claim 13, wherein the at least one electrode which is in contact with the hydrogenation catalyst is used as the cathode or as an anode or as the cathode and the anode.

Claim 21 (currently amended): A process as claimed in claim 13, wherein the hydrogenation catalyst comprises a noble ~~gas~~ metal.

Claim 22 (currently amended): A process as claimed in claim 3, wherein the hydrogenation catalyst comprises a noble ~~gas~~ metal.